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ai preferred equivalent operational amplifier OA subcircuit that includes negative feedback as shown in Figure 4, with only shunt capacitor C4 and feedback resistor R4 remaining along with voltage source V_{DROP} , and low noise power supply V_{IN} , from among the circuit elements shown in Figure 3. From Figure 4, a frequency, $f_{VOUT}(-3db)$ is defined, in which the impedance of shunt capacitor C4 is equal in magnitude to the impedance of feedback resistor R4. At $f_{VOUT}(-3db)$, $\frac{1}{2} \Delta V_{OUT}$ is dropped across feedback resistor R4 and the other $\frac{1}{2} \Delta V_{OUT}$ across shunt capacitor C4. In other words, at the frequency $f_{VOUT}(-3db)$, the circuit impedance of the Figure 4 combination of elements seen by the noisy load 401 is equal to the dynamic load impedance of the noisy load 401 itself.
